

THE SCIENCE OF ENERGY BALANCE: CALORIE INTAKE AND PHYSICAL ACTIVITY		
Ohio Academic Standards for Life Science - Grades 6 & 7		
Lesson	Standard	Description
1	1	Explain that many of the basic functions of organisms are carried out by or within cells and are similar in all organisms.
1	2	Explain that multicellular organisms have a variety of specialized cells, tissues, organs and organ systems that perform specialized functions.
1, 3	7	Explain that photosynthetic cells convert solar energy into chemical energy that is used to carry on life functions or is transferred to consumers and used to carry on their life functions.
3, 4	8	Investigate the great diversity among organisms.
Ohio Academic Standards for Physical Science - Grade 7		
1, 2, 3	3	Identify different forms of energy (e.g., electrical, mechanical, chemical, thermal, nuclear, radiant and acoustic).
2, 3, 4	4	Explain how energy can change forms but the total amount of energy remains constant.
Ohio Academic Standards for Scientific Inquiry – Grade 7		
1, 3, 4	1	Explain that variables and controls can affect the results of an investigation and that ideally one variable should be tested at a time; however it is not always possible to control all variables.
1, 3, 4	2	Identify simple independent and dependent variables.
1, 2, 3, 4	3	Formulate and identify questions to guide scientific investigations that connect to science concepts and can be answered through scientific investigations.
1, 2, 3, 4	4	Choose the appropriate tools and instruments and use relevant safety procedures to complete scientific investigations.
1, 2, 3, 4	5	Analyze alternative scientific explanations and predictions and recognize that there may be more than one good way to interpret a given set of data.
4	6	Identify faulty reasoning and statements that go beyond the evidence or misinterpret the evidence.
1, 2, 3, 4	7	Use graphs, tables and charts to study physical phenomena and infer mathematical relationships between variables (e.g., speed and density).

Ohio Academic Standards for Scientific Ways of Knowing – Grade 7		
4	1	Show that the reproducibility of results is essential to reduce bias in scientific investigations.
4	2	Describe how repetition of an experiment may reduce bias.
2, 3, 4	3	Describe how the work of science requires a variety of human abilities and qualities that are helpful in daily life (e.g., reasoning, creativity, skepticism and openness).
Ohio Academic Standards for English Language Arts – Grade 7		
Lesson	Standard	Description
2, 3, 4	Vocabulary 1	Define the meaning of unknown words through context clues and the author's use of comparison, contrast, definition, restatement and example.
2, 3, 4, 5	Reading Process 4	Summarize the information in texts, using key ideas, supporting details and referencing gaps or contradictions.
All lessons	Reading Applications 5	Analyze information found in maps, charts, tables, graphs, diagrams, cutaways and overlays.
3, 4, 5	Writing Process 6	Organize writing with an effective and engaging introduction, body and a conclusion that summarizes, extends or elaborates on points or ideas in the writing.
3, 4, 5	Writing Process 8	Group related ideas into paragraphs, including topic sentences following paragraph form, and maintain a consistent focus across paragraphs.
3, 4, 5	Writing Process 12	Add and delete information and details to better elaborate on a stated central idea and to more effectively accomplish purpose
3, 4	Writing Applications 4	Write informational essays or reports, including research, that present a literal understanding of the topic, include specific facts, details and examples from multiple sources, and create an organizing structure appropriate to the purpose, audience and context.
5	Writing Applications 5	Write persuasive essays that establish a clear position and include relevant information to support ideas.
4, 5	Research 1	Generate a topic, assigned or personal interest, and open-ended questions for research and develop a plan for gathering information.
3, 4, 5	Research 5	Analyze and organize important information, and select appropriate sources to support central ideas, concepts and themes.

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2, 3, 4, 5	Research 8	Use a variety of communication techniques, including oral, visual, written or multimedia reports, to present information that supports a clear position with organized and relevant evidence about the topic or research question.
Ohio Academic Standards for Mathematics – Grade 7		
Lesson	Standard	Description
1, 2, 3, 4	Number, Number Sense, and Operations 7	Solve problems using the appropriate form of a rational number (fraction, decimal or percent).
2, 4	Measurement 4	Solve problems involving proportional relationships and scale factors; e.g., scale models that require unit conversions within the same measurement system.
1, 2, 3, 4	Measurement 5	Analyze problem situations involving measurement concepts, select appropriate strategies, and use an organized approach to solve narrative and increasingly complex problems.
1, 2, 3, 4	Patterns, Functions and Algebra 1	Represent and analyze patterns, rules and functions with words, tables, graphs and simple variable expressions.
4	Patterns, Functions and Algebra 5	Represent linear equations by plotting points in the coordinate plane.
2, 3, 4	Patterns, Functions and Algebra 8	Use formulas in problem-solving situations.
1, 2, 3, 4	Patterns, Functions and Algebra 10	Analyze linear and simple nonlinear relationships to explain how a change in one variable results in the change of another.
2, 3, 4	Data Analysis and Probability 8	Make predictions based on theoretical probabilities, design and conduct an experiment to test the predictions, compare actual results to predicted results, and explain differences.